

CLAIMS

What is claimed is:

1. In a computing device having an associated output device, a method for automatically executing an interruption operation on media content in response to an event, comprising the acts of:

as media content is obtained and output by the output device, detecting a first event indicating that the output of the media content is to be modified; and

in response to detecting the first event, automatically executing an operation on the media content such that the output of the media content is modified and can be later restored without loss of continuity of the media output.

2. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting a ring signal on a telephone line.

3. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting an off-hook condition of a telephone.

4. The method as recited in claim 3, wherein the act of detecting an off-hook condition of a telephone comprises the act of testing the impedance of a telephone line associated with the telephone.

5. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting a call waiting signal on a telephone line.

6. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting receipt of an electronic message.

7. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting a signal from a device associated with a home network.

8. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting a signal from a motion sensor.

9. The method as recited in claim 1, wherein the act of detecting the first event comprises the act of detecting a signal from a personal transmitter.

10. The method as recited in claim 1, wherein detecting a first event indicating that the output of the media content is to be modified comprises detecting a first event indicating that the output of media content is to be interrupted.

11. The method as recited in claim 10, wherein:
the media content comprises a television program; and
the operation comprises a pause operation performed on the television program.

12. The method as recited in claim 1, wherein the act of detecting a first event indicating that the output of the media content is to be modified comprises the act of, as television programming is received from a video on demand server and output by the output

device, detecting a first event indicating that the output of the television programming is to be interrupted.

13. The method as recited in claim 12, wherein the act of detecting a first event indicating that the output of the television programming is to be interrupted comprises the act of transmitting a signal from the computing device to the video on demand server indicating that the output of the television programming is to be interrupted by the video on demand server.

14. The method as recited in claim 1, wherein the act of automatically executing an operation on the media content comprises the act of automatically executing an operation on the media content such that the output of the media content is interrupted and can be later resumed without loss of continuity of the media output.

15. The method as recited in claim 14, further comprising the act of, in response to a second event, resuming the output of the media content.

16. The method as recited in claim 14, wherein:
the media content comprises a television program;
the operation comprises a pause operation performed on the television program;
and
output of the television program is resumed in response to the second event such that, from the standpoint of a viewer, it appears as if a live broadcast of the television program had been paused.

17. The method as recited in claim 1, further comprising the act of displaying a message associated with detection of the first event.

18. The method as recited in claim 17, wherein the act of displaying a message associated with detection of the first event comprises the act of displaying caller ID data associated with an incoming telephone call.

19. In a computing device having an associated display device and an associated storage device, a method of automatically pausing the display of a television program in response to an event in the environment of the computing device, comprising the acts of:

as the television program is obtained and displayed on the display device, detecting a first event that has been designated to indicate that the display of the television program is to be interrupted;

in response to the detected event, automatically storing a television signal in which the television is encoded on the storage device so as to pause the display of the television program; and

in response to a second event, resuming display of the television signal by displaying the television signal that has been stored on the storage device.

20. The method as recited in claim 19, wherein the act of detecting the first event comprises the act of detecting a ring signal on a telephone line.

21. The method as recited in claim 19, wherein the act of detecting the first event comprises the act of detecting an off-hook condition of a telephone.

22. The method as recited in claim 21, wherein the off-hook condition is detected immediately after a ring signal on a telephone line associated with the telephone.

23. The method as recited in claim 19, wherein the act of detecting the first event comprises the act of detecting receipt of an electronic message.

24. The method as recited in claim 19, wherein the act of detecting the first event comprises the act of detecting a signal from a device associated with a home network.

25. In a computing device having an interruption engine and an associated output device, a method for automatically executing an interruption operation on media content in response to an event, comprising the acts of:

as media content is received and output by the output device, detecting an event in the environment of the computing device;

identifying a priority value to be assigned to the event based on priority information stored at the computing device;

applying a rule of a set of rules to the priority value assigned to the event to identify an interruption operation; and

automatically executing the interruption operation on the media content.

26. The method as recited in claim 25, wherein the act of detecting the event comprises the act of determining that a telephone call is being made or received.

27. The method as recited in claim 25, wherein the act of detecting the event comprises the act of detecting the receipt of an electronic message.

28. The method as recited in claim 25, wherein the act of detecting the event comprises the act of receiving information via an input mechanism that was established for interrupt sources to inform the interruption engine that the output of media content is to be interrupted.

29. The method as recited in claim 25, further comprising the act of receiving the set of rules in broadcast data encoded in a television signal.

30. The method as recited in claim 25, further comprising the act of receiving data that was registered with the interruption engine by a user, wherein the data defines the set of rules.

31. The method as recited in claim 25, wherein the interruption operation is such that the output of the media content is paused.

32. The method as recited in claim 25, further comprising the act of the interruption engine learning the behavior of a viewer associated with the computing device so as to generate the information on which the priority value to be assigned to the event is based.

33. The method as recited in claim 25, further comprising the act of the interruption engine learning the behavior of a viewer associated with the computing device so as to generate the rule of the set of rules.

34. The method as recited in claim 25, wherein the act of applying a rule of a set of rules to the priority value comprises the act of further applying an exception to the rule.

35. The method as recited in claim 25, wherein the act of applying a rule of a set of rules to the priority value comprises a video on demand server applying a rule of a set of rules to the priority value.

36. The method as recited in claim 25, wherein the interruption operation comprises pausing the output of the media content.

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37. A computer program product for implementing, in a computing device having an associated output device, a method for automatically executing an interruption operation on media content in response to an event, the computer program product comprising:

a computer-readable medium carrying computer-executable instructions that, when executed at the computing device, cause the computing device to perform the method, including the acts of:

as media content is obtained and output by the output device, detecting a first event indicating that the output of the media content is to be modified; and

in response to detecting the first event, automatically executing an operation on the media content such that the output of the media content is modified and can be later restored without loss of continuity of the media output.

38. A computer program product for implementing, in a computing device having an associated display device and an associated storage device, a method of automatically pausing the display of a television program in response to an event in the environment of the computing device, the computer program product comprising:

a computer-readable medium carrying computer-executable instructions, that when executed at the computing device, cause the interruption engine to perform the method, including the acts of:

as the television program is received and displayed on the display device, detecting a first event that has been designated to indicate that the display of the television program is to be interrupted;

in response to the detected event, automatically storing a television signal in which the television is encoded on the storage device so as to pause the display of the television program; and

in response to a second event, resuming display of the television signal by displaying the television signal that has been stored on the storage device.